

MFJ

Dual Band Tuner

Model MFJ-923



INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment !

MFJ ENTERPRISES, INC.

300 Industrial Park Road
Starkville, MS 39759 USA
Tel: 662-323-5869 Fax: 662-323-6551

Disclaimer

Information in this manual is designed for user purposes only and is not intended to supersede information contained in customer regulations, technical manual/documents, positional handbooks, or other official publications. The copy of this manual provided to the customer will not be updated to reflect current data.

Customers using this manual should report errors or omissions, recommendations for improvements, or other comments to MFJ Enterprises, 300 Industrial Park Road, Starkville, MS 39759.
Phone: (662) 323-5869; FAX: (662) 323-6551.
Business Hours: M-F 8-4:30 CST.

INTRODUCTION

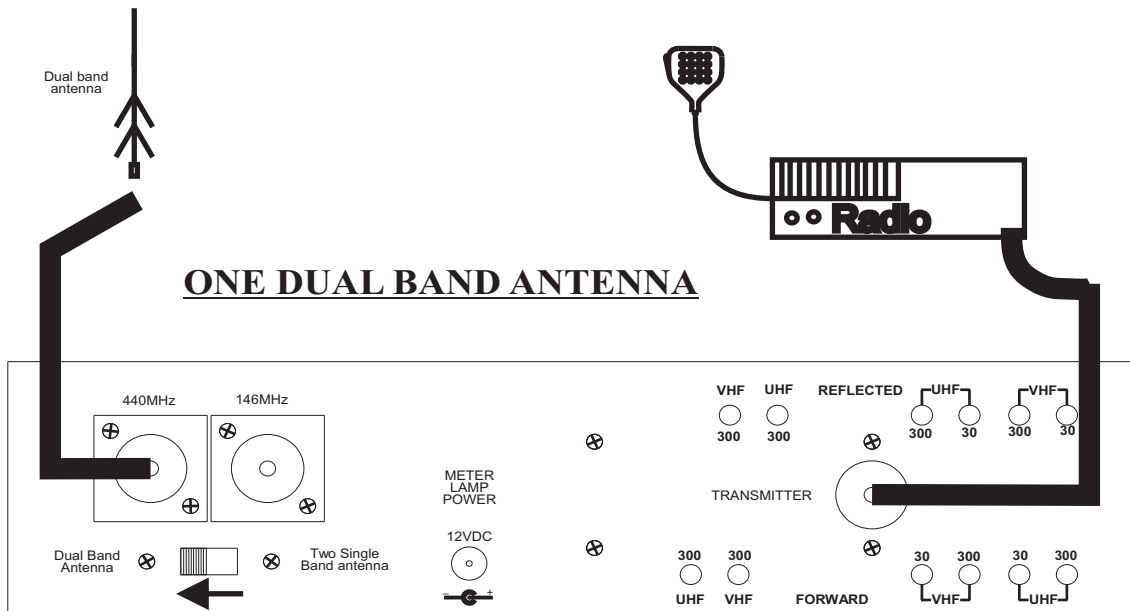
The MFJ-923 Antenna Tuner was designed with today's dual band radios in mind. This unit has a single input connector so that it will easily connect to your dual band transceiver. Two output connectors give you the option of using a dual band antenna or two single band antennas for maximum performance. A switch on the back of the unit allows you to select two single or one dual band antenna. This option eliminates the need for a duplexer when operating two antennas with one radio. The built in power meter has three selectable power settings for each band.

INSTALLATION

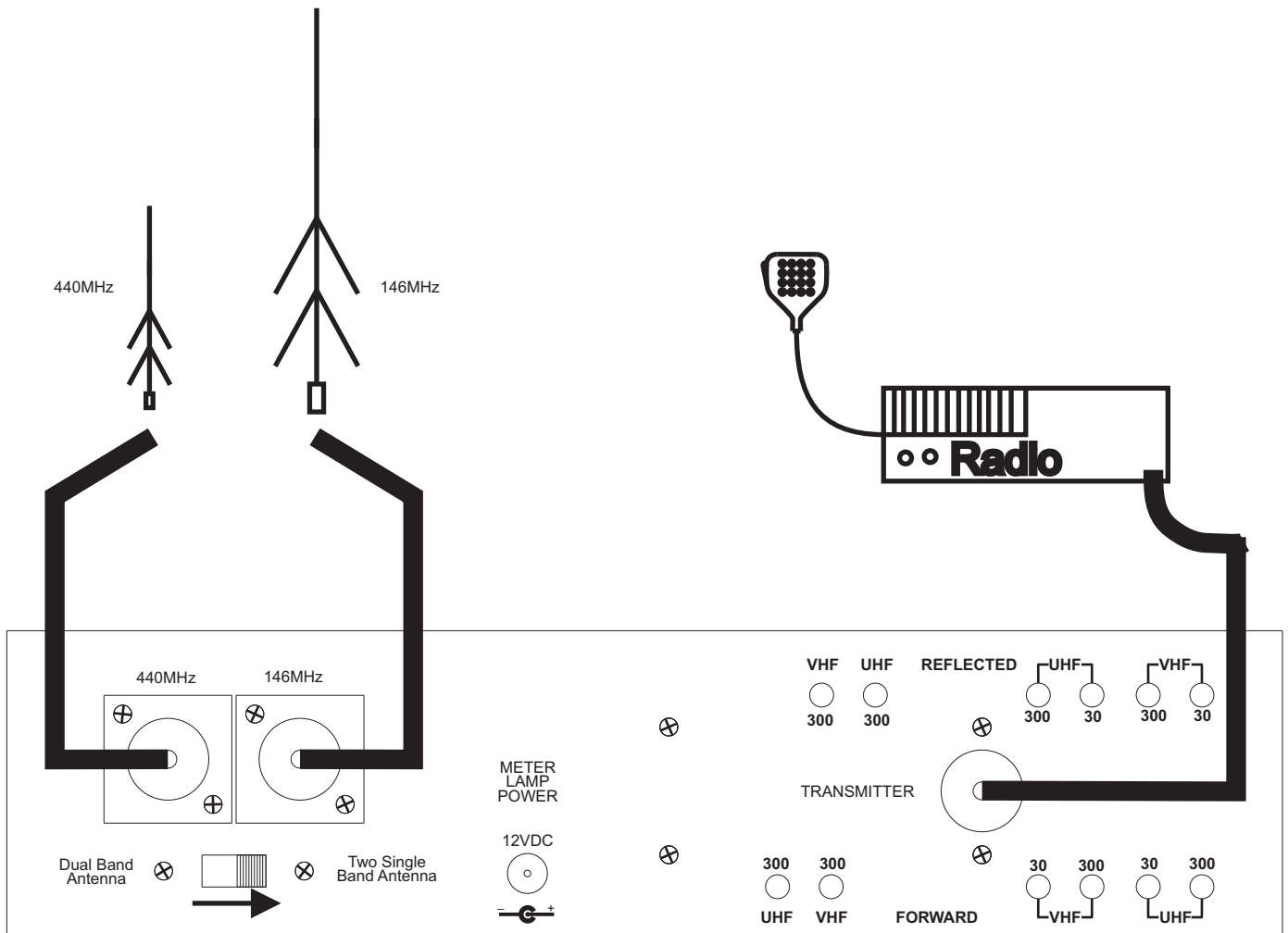
The MFJ-923 antenna tuner was designed with today's dual band radios in mind. This unit has a single input connector so that it will easily connect to your dual band transceiver. Two output connectors give you the option of using a dual band antenna or two single band antennas for maximum performance. A switch on the back of the unit allows you to select the antenna option. This eliminates the need for a duplexer when operating two separate antennas with one radio. The built in power meter has three selectable ranges for each band.

The MFJ-923 should be installed between the transmitter and antenna.

1. Locate the tuner in a convenient location at the operating position.
2. Use a 50 ohm coaxial cable to connect the transmitter or transceiver to the SO-239 labeled TRANSMITTER on the back of the tuner.
3. Connect an antenna feed to the appropriate tuner output:
 - (A) If using a dual band antenna then select either of the output connectors. When the output switch is in the dual band position, both connectors are the same and either will work. Only use one of the connectors, do not connect anything else to the other. Leave it open.



(B) If using two single band antennas, connect the two meter antenna to the connector marked 146MHz. Connect the 440 antenna to the connector labled 440MHz. Move the switch to “two single band”



4. Connect the power jack on the back of the unit to a 12VDC power supply using the supplied power connector. Connect you tuner and transmitter to a good earth ground.

OPERATION

This antenna tuner operates slightly different than most manual tuners do. You will notice that there are five tuning knobs on the front of the unit and one switch for the power level and band selection.

The band selection and power switch simply adjust the sensitivity of the watt meter to the correct frequency and power level indicated on the dial. It has no affect on the tuning of the antenna. Simply select which band you will be tuning and the power range that you will be using to get an accurate measurement of the swr and power level. Tuning should be done at the lowest power level on the radio that still allows the meter to indicate SWR levels. It is not required to have the selector switch in the correct band for the tuner to function properly. The selector switch affects the meter readings only and in no way affects the tuning of the load. Once you have tuned each band, you may switch bands on the radio without changing the watt meter settings.

Tuning the two meter band is accomplished by adjusting the two knobs on the top row as indicated by the 146MHz line connecting the dials. This operation is very similar to tuning a normal T-match tuner. Adjust each knob for lowest reflected power reading. After making adjustments to one knob, readjust the other and then go back to the original and adjust it again. Do this back and forth method until a suitable SWR has been obtained.

Tuning the 440 side of the tuner is much the same as the two meter side with the addition of another knob. The three knobs across the bottom of the unit are used for tuning the 440 band. Use the same method as tuning the two meter side. Go back and forth to each knob until a suitable SWR is obtained. The additional knob will make it a little more difficult but it will only take a little more experimentation and time.

This tuner is designed to match dual band or single band antennas in the two meter and 70cm amature bands. Very large SWR values may not be in range of the tuner and indicate a severe problem in the feed line or antenna system.

TECHNICAL ASSISTANCE

If you have any problem with this unit first check the appropriate section of this manual. If the manual does not reference your problem or your problem is not solved by reading the manual you may call *MFJ Technical Service* at **662-323-0549** or the *MFJ Factory* at **662-323-5869**. You will be best helped if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask.

You can also send questions by mail to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759; by Facsimile to 662-323-6551; or by email to techinfo@mfjenterprises.com. Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.

NOTES:

FULL 12-MONTH WARRANTY

MFJ Enterprises, Inc. warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free from defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied.

1. The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original or machine reproduction of such proof of purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.
2. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order. This is good on all products except antennas and software to cover postage and handling for return from in warranty service. We also take MasterCard, Visa, American Express, and Discover credit cards. Postage and handling may vary according to the weight of the product in question. You should specify what type of delivery service you wish. We can send by UPS, U.S. Postal service or Fedex. MFJ doesn't guarantee delivery by US Postal Service.
3. MFJ Enterprises, Inc. will supply replacement parts free of charge for any MFJ product under warranty upon request, provided the following terms are satisfied. MFJ must receive the original parts you wish to replace, your proof-of-purchase, and a personal check, cashiers check or money order must be provided to cover postage and handling. Postage and handling may vary according to the weight of the product in question. We also take MasterCard, Visa, American Express and Discover credit cards.
4. This warranty is **NOT** void for owners who attempt to repair defective units. Technical consultation is available by calling (662) 323-5869.
5. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.
6. Wired and tested PC board products are covered by this warranty provided **only the wired and tested PC board product is returned**. Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, or cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense un-repaired.
7. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.
8. **Out-of-Warranty Service:** MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.
9. This warranty is given in lieu of any other warranty expressed or implied.
10. MFJ Enterprises, Inc. reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
11. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to **MFJ Enterprises, Inc., 300 Industrial Park Rd, Starkville, Mississippi 39759, USA** and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase and a telephone number.
12. This warranty gives you specific rights, and you may also have other rights, which vary from state to state.



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